What I claim is:

1. An electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness, folded into arms forming one or more pockets with an apex of said pocket located on a downstream side of said medium and with a base of said pocket open to an upstream side of said apparatus;

a first electrically conducting, perforated grid disposed over a first major exterior of said medium to cover said downstream side of each of said arms;

a second electrically conducting, perforated grid electrically separated from said first grid by said thickness, disposed across a second major exterior of each of said arms on an upstream side of said medium; and

an electrode separated from said upstream side of said medium, with said electrode spaced-apart from opposite corresponding ones of said arms while extending through said pocket parallel to and spaced-apart from said second grid.

2. The apparatus of claim 1, further comprised of said base exhibiting a linear dimension greater than said thickness.

3. The apparatus of claim 1, further comprised of a distance between said base and said apex being greater than or equal to a linear dimension exhibited by said base.

4. The apparatus of claim 1, further comprised of a distance between said base and said apex being not less than a linear dimension exhibited by said base, and said linear dimension being greater than said thickness.

5. The apparatus of claim 1, further comprised of:

an air inlet; and

an electrically conducting screen spaced-apart from said electrode and separated by said electrode from said second grid, extending across said air inlet.

6. The apparatus of claim 1, with said layer further comprised of:

said layer disposed in a plurality of pleats within each of said arms, with said pleats undulating between said first grid and said second grid.

7. The apparatus of claim 1, further comprised of:

said layer extending along each of said arms in an elongate linear continuum lying between said first grid and said second grid.

8. The apparatus of claim 6, further comprised of said layer extending along each of said arms in a linear continuum lying between said first grid and said second grid.

9. The apparatus of claim 1, further comprised of:

said layer extending along each of said arms in a linear continuum lying between said first grid and said second grid; and

an electrical insulator maintaining said second grid physically spaced-apart from said medium.

10. The apparatus of claim 1, further comprised of:

said arms being joined at said apex to form a V-shape.

11. The apparatus of claim 1, further comprised of:

said arms being substantially parallel and being joined at said apex.

12. The apparatus of claim 1, further comprised of:

said second grid being borne by said upstream surface and lying upon said arms.

13. The apparatus of claim 6, further comprised of:

said second grid being borne by said upstream surface and lying upon said pleats.

14. The apparatus of claim 1, further comprised of:

an electrical insulator maintaining said second grid spaced apart from said upstream surface.

15. The apparatus of claim 1, further comprised of:

said second grid comprising a material porous to passage of gaseous fluid through said apparatus but partially impervious to particles borne by the gaseous fluid.

16. The apparatus of claim 1, further comprised of:

said second grid comprising a material porous to passage of gaseous fluid passing through said apparatus but partially impervious to particles borne by the gaseous fluid; and

said second grid being relatively more electrically conductive than said medium.

17. The apparatus of claim 1, further comprised of;

said second grid comprising a material porous to passage of gaseous fluid passing through said apparatus but partially impervious to particles borne by the gaseous fluid; and

said second grid being made of a material selected from a group comprising carbon, carbon fibers, fibers coated with carbon, and combinations thereof.

18. The apparatus of claim 1, further comprising at least one of said first grid and said second grid being made of a material selected from a group comprised of carbon, carbon fibers and fibers coated with carbon.

19. The apparatus of claim 1, further comprising:

a first electrical conductor coupling said first grid to a local reference potential;

a second electrical conductor disposed to couple said electrode to a second and substantially different potential; and

an electrical insulator maintaining said second grid at a first potential difference relative to said electrode, and at a second potential difference relative to said first grid.

20. The apparatus of claim 1, further comprising:

a first electrical conductor coupling said first grid and to a local reference potential;

a second electrical conductor disposed to couple said electrode to a second and substantially different potential.

21. The apparatus of claim 1, further comprising:

an inlet accommodating egress of gaseous fluid into said apparatus; and

an electrically conducting screen spaced-apart from said electrode and spaced-apart from said second grid, extending across said inlet and establishing a potential difference between said electrically conducting screen and said electrode that creates significant ionization of the gaseous fluid.

22. The apparatus of claim 1, further comprising:

a first electrical conductor coupling said first grid to a local reference potential;

a second electrical conductor disposed to couple said electrode to a second and substantially different potential; and

an electrical insulator maintaining a first potential difference between said electrode and said first grid.

23. The apparatus of claim 1, further comprising:

a first electrical conductor coupling said first grid and to a local reference potential;

a second electrical conductor disposed to couple said electrode to a second and substantially different potential;

an electrical insulator maintaining a first potential difference between said electrode and said first grid; and

an electrically conducting screen spaced-apart from said electrode and separated by said electrode from said second grid, extending across said inlet and establishing a third potential difference between said electrically conducting screen and said electrode.

24. The apparatus of claim 1, further comprising:

a first electrical conductor coupling said first grid and to a local reference potential;

a second electrical conductor disposed to couple said electrode to a second and substantially different potential;

an electrical insulator maintaining a first potential difference between said electrode and said first grid;

an inlet accommodating egress of gaseous fluid into said apparatus; and

an electrically conducting screen spaced-apart from said electrode and spaced-apart

from said second grid, extending across said inlet and establishing a third potential difference between said electrically conducting screen and said electrode that creates significant ionization of the gaseous fluid.

25. An electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness between a major upstream surface and a major downstream surface, folded into a pocket with one or more arms of said pocket extending in an upstream direction from an apex of said pocket toward an open base of said pocket;

a first electrically conducting, perforated grid borne by said downstream surface and lying across said arms;

a second electrically conducting, perforated grid electrically separated from said first grid by said thickness, extending across said upstream surface of each of said arms; and

a plurality of electrodes spaced apart from said second grid and positioned within said pocket between said apex and said base, extending along different corresponding ones of said arms in parallel alignment with said apex.

26. The apparatus of claim 25, further comprised of:

a first electrical conductor coupling said first grid to a local reference potential;

a second electrical conductor disposed to couple said electrodes to a second and substantially different potential; and

an electrical insulator interrupting direct electrical continuity between said first grid and said second grid.

27. The apparatus of claim 25, further comprised of an electrical insulator maintaining said second grid spaced apart from said upstream surface of each of said arms.

28. The apparatus of claim 25, further comprised of said second grid comprising a material porous to passage of transient air through said apparatus but impervious to particles borne by the transient gaseous fluid.

29. The apparatus of claim 25, further comprised of said open base exhibiting a linear dimension greater than said thickness.

30. The apparatus of claim 25, further comprised of a distance between said open base and said apex being greater than or equal to a linear dimension exhibited by said open house.

31. The apparatus of claim 25, further comprised of a distance between said open base and said apex being not less than a linear dimension exhibited by said open base, and said linear dimension being greater than said thickness.

32. The apparatus of claim 25, further comprised of:

a channel forming an air inlet accommodating passage of the transient gaseous fluid; and

an electrically conducting screen spaced-apart from said plurality of electrodes and spaced-apart from said second grid, extending across said air inlet.

33. The apparatus of claim 25, further comprised of said layer along each of said arms arranged in a plurality of folds undulating alternately between said first grid and said second grid.

34. The apparatus of claim 25, further comprised of:

said layer extending along each of said arms arranged in a linear continuum positioned between said first grid and said second grid.

35. The apparatus of claim 25, further comprised of:

said layer extending along each of said arms in a linear continuum positioned between said first grid and said second grid; and

an electrical insulator preventing direct electrical continuity between said second grid and said medium while maintaining said second grid physically spaced apart from said layer.

36. An electrically enhanced filtering process, comprising:

positioning across a flow of transient gaseous fluid, a porous filter medium exhibiting a thickness and folded into one or more arms forming at least one pocket with each

pocket closed at an apex on a downstream side of said arms and with a base of each pocket opening upstream sides of said arms to incidence of said flow;

maintaining a first electrically conductive grid disposed along said downstream sides of said arms able to accommodate passage of the transient air from said medium;

maintaining a second electrically conductive grid covering said upstream sides of said arms in a position spaced-apart from said first grid to accommodate said passage of the transient gaseous fluid, at a potential difference relative to said first grid; and

locating a first electrode within said pocket at a location within the flow of the transient gaseous fluid, spaced-apart from and parallel to said second grid, and disposed to transfer a charge onto said second grid.

37. The process of claim 36, further comprised of:

coupling said first grid to a reference potential; and

establishing said potential difference between said second grid and said first grid by applying to said electrode a potential difference relative to said reference potential.

38. The process of claim 36, further comprised of:

maintaining a control electrode spaced-apart and upstream from said first electrode and spaced-apart and upstream from said second grid, within the flow of the transient air.

39. The process of claim 36, further comprised of arranging said medium along each

of said arms with a plurality of folds undulating alternately toward said first grid and said second grid.

40. The process of claim 36, further comprised of arranging said medium along each of said arms in a linear continuum positioned between said first grid and said second grid.

41. The process of claim 36, further comprised of:

extending said medium as a layer along each of said arms in an elongate linear continuum positioned between said first grid and said second grid; and

electrically isolating said second grid from direct electrical continuity with said medium.

42. A filter electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness, folded into one or more arms forming a pocket with an apex of said pocket located on a downstream side of said medium and with a base of said pocket open to an upstream side of said apparatus;

a first electrically conducting, perforated grid disposed on an exterior of said media to cover said downstream side of each of said arms; and

a second electrically conducting, perforated grid electrically separated from said first grid by at least said thickness, disposed across the exterior of each of said arms on an upstream side of said medium.

43. The apparatus of claim 42, further comprised of said base exhibiting a linear dimension greater than said thickness.

44. The apparatus of claim 42, further comprised of a distance between said base and said apex being greater than or equal to a linear dimension exhibited by said base.

45. The apparatus of claim 42, further comprised of a distance between said base and said apex being not less than a linear dimension exhibited by said base, and said linear dimension being greater than said thickness.

46. The apparatus of claim 42, further comprised of:

an air inlet; and

an electrically conducting screen spaced-apart from said electrode and spaced-apart from said second grid, extending across said air inlet.

47. The apparatus of claim 42, with said layer further comprised of:

said layer disposed in a plurality of pleats within each of said arms, with said pleats undulating between said first grid and said second grid.

48. The apparatus of claim 42, further comprised of:

said layer extending along each of said arms in a linear continuum lying between said first grid and said second grid.

49. The apparatus of claim 42, further comprised of said layer extending along each of said arms in an elongate linear continuum lying between said first grid and said second grid.

50. The apparatus of claim 42, further comprised of:

said layer extending along each of said arms in a linear continuum lying between said first grid and said second grid; and

an electrical insulator maintaining said second grid physically spaced-apart from said medium.

51. The apparatus of claim 42, further comprised of said arms being joined at said apex to form a V-shape.

52. The apparatus of claim 42, further comprised of said arms being substantially parallel and being joined at said apex.

53. The apparatus of claim 42, further comprised of said second grid being borne by said upstream surface and lying upon said arms.

54. The apparatus of claim 47, further comprised of said second grid being borne by said upstream surface and lying upon said pleats.

55. The apparatus of claim 42, further comprised of an electrical insulator maintaining said second grid spaced apart from said upstream surface.

56. The apparatus of claim 42, further comprised of said second grid comprising a material porous to passage of gaseous fluid through said apparatus but partially impervious to particles borne by the gaseous fluid.

57. The apparatus of claim 42, further comprised of:

said second grid comprising a material porous to passage of gaseous fluid passing through said apparatus but partially impervious to particles borne by the gaseous fluid; and

said second grid being relatively more electrically conductive than said medium.

58. The apparatus of claim 42, further comprised of;

said second grid comprising a material porous to passage of gaseous fluid passing through said apparatus but partially impervious to particles borne by the gaseous fluid; and

said second grid being made of a material selected from a group comprising carbon, carbon fibers coated with carbon.

59. The apparatus of claim 42, further comprising at least one of said first grid and said second grid being made of a material selected from a group comprised of carbon, carbon fibers and fibers coated with carbon.

60. A filter for an electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness disposed in a plurality of pleats within each of one or more of a plurality of arms, with said pleats undulating in succession, folded into said one or more arms forming a pocket with an apex of said pocket located on a downstream side of said medium and with a base of said pocket open to an upstream side of said apparatus;

a first electrically conducting, perforated grid disposed to cover pleats along said downstream side of each of said arms;

a second electrically conducting, perforated grid electrically separated from said first grid by said thickness, disposed across pleats along a second exterior of each of said arms on an upstream side of said medium; and

an electrode separated from said upstream side of said medium, with said electrode spaced-apart by a fixed distance from opposite corresponding ones of said arms while extending through said pocket parallel to and spaced-apart from said second grid.

61. The apparatus of claim 60, further comprised of said base exhibiting a linear dimension greater than said thickness.

62. The apparatus of claim 60, further comprised of a distance between said base and said apex being greater than or equal to a linear dimension exhibited by said base.

63. The apparatus of claim 60, further comprised of a distance between said base and said apex being not less than a linear dimension exhibited by said base, and said linear dimension being greater than said thickness.

64. An electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness, folded into one or more arms forming a pocket with an apex of said pocket located on a downstream side of said medium and with a base of said pocket open to an upstream side of said apparatus;

a first electrically conducting, perforated grid disposed on an exterior of said medium to cover said downstream side of each of said arms;

a second electrically conducting, perforated grid electrically separated from said first grid by said thickness, disposed across the exterior of each of said arms on an upstream side of said medium;

a first electrode separated from said upstream side of said medium, with said electrode spaced-apart by a fixed distance from opposite corresponding ones of said arms while extending through said pocket parallel to and spaced-apart from said second grid; and

a second electrode spaced apart from said electrode and said second electrically

conducting grid, disposed to be maintained at a reference potential difference relative to said first electrode.

65. The apparatus of claim 64, further comprised of said base exhibiting a linear dimension greater than said thickness.

66. The apparatus of claim 64, further comprised of a distance between said base and said apex being greater than or equal to a linear dimension exhibited by said base.

67. The apparatus of claim 64, further comprised of a distance between said base and said apex being not less than a linear dimension exhibited by said base, and said linear dimension being greater than said thickness.

68. An electrically enhanced filtering apparatus, comprising:

a layer of a porous filter medium exhibiting a thickness disposed in a plurality of pleats within each of one or more of a plurality of arms, with said pleats undulating in succession and folded into one or more arms forming a pocket with an apex of said pocket located on a downstream side of said medium and with a base of said pocket open to an upstream side of said apparatus;

a first electrically conducting, perforated grid disposed on an exterior of said medium to cover said downstream side of each of said arms;

a second electrically conducting, perforated grid electrically separated from said first grid by said thickness, disposed across the exterior of each of said arms on an upstream side of said medium;

a first electrode separated from said upstream side of said medium, with said electrode spaced-apart by a fixed distance from opposite corresponding ones of said arms while extending through said pocket parallel to and spaced-apart from said second grid; and

a second electrode spaced apart from said electrode and said second electrically conducting grid, disposed to be maintained at a reference potential difference relative to said first electrode.

69. The apparatus of claim 68, further comprised of said base exhibiting a linear dimension greater than said thickness.

70. The apparatus of claim 68, further comprised of a distance between said base and said apex being greater than or equal to a linear dimension exhibited by said base.

71. The apparatus of claim 68, further comprised of a distance between said base and said apex being not less than a linear dimension exhibited by said base, and said linear dimension being greater than said thickness.

72. An electrically enhanced filtering process, comprising:

positioning across a flow of transient gaseous fluid, a porous filter medium exhibiting a thickness and folded into one or more arms forming at least one pocket with a closed apex on a downstream side of said medium and with a base of each said pocket opening upstream sides of said arms to incidence of said flow;

maintaining a first electrically conductive grid disposed along said downstream side of said medium able to accommodate passage of the transient air through said medium;

maintaining a second electrically conductive grid covering said upstream sides of said arms in a position spaced-apart from said first grid to accommodate said passage of the transient gaseous fluid, at a potential difference relative to said first grid;

locating a first electrode within said pocket at a location within the flow of the transient gaseous fluid, spaced-apart from and parallel to said second grid, and disposed to transfer a charge onto said second grid; and

maintaining a second electrode spaced-apart from said first electrode and said second electrically conductive grid, at a reference potential relative to said first electrode.

73. The process of claim 72, further comprised of:

coupling said first grid to a reference potential; and

establishing said potential difference between said second grid and said first grid by applying to said electrode a potential difference relative to said reference potential.

74. The process of claim 72, further comprised of:

maintaining a control electrode spaced-apart and upstream from said first electrode, within the flow of the transient air.

75. The process of claim 72, further comprised of pleating said filter medium in a plurality of said arms into a plurality of pleats undulating between said first grid and said second grid.

76. The process of claim 72, further comprised of arranging said filter medium as a flat and elongate layer extending along a plurality of said arms between said first grid and said second grid.

77. The process of claim 72, further comprised of inserting electrical insulators between said filter medium and said second grid.

78. An electrically enhanced filtering process, comprising:

arranging a layer of a filter medium exhibiting a thickness, into at least two folds to define an apex between each pair of said folds on a downstream side of said layer when said layer is positioned across a flow of a gaseous fluid, and an open base on an upstream side of said layer opposite from each corresponding apex;

disposing a first perforated, electrically conducting grid along exposed major surfaces of said downstream side of said layer; and

positioning a second perforated, electrically conducting grid along exposed major surfaces of said upstream side of said layer, spaced-apart from said first grid by at least said thickness.

79. The process of claim 78, further comprised of arranging said layer with a distance between each corresponding base and apex formed between each pair of said transversely oblique folds being not less than a linear dimension exhibited by said base, with said linear dimension being greater than said thickness.

80. The process of claim 78, further comprised of removably attaching said filter medium onto said first grid.

81. The process of claim 78, further comprised of inserting an assembly formed by said first grid and said filter medium into a frame with an electrically insulating seal separating said assembly from said frame and restricting passage of the gaseous fluid between said assembly and said frame.

82. The process of claim 78, further comprised of:

forming an assembly of said first grid and said filter medium;

potting ends of said assembly intermediate, said upstream side and said downstream side with an electrically insulating material; and

inserting said assembly into a frame with said insulating material forming a seal to passage of the gaseous fluid between said ends and said frame.

83. An electrically enhanced filtering process, comprising:

arranging into at least two transversely oblique folds, a layer of a filter medium exhibiting first major exterior surfaces on an upstream side of said layer separated by a thickness of said layer from second major exterior surfaces on a downstream side of said layer to accommodate passage of gaseous fluids while trapping particles borne by the gaseous fluids;

aligning a first electrically conducting grid with said folds along said first major exterior surfaces;

aligning a second electrically conducting grid with said folds along said second major exterior surfaces.

84. The process of claim 83, further comprised of arranging said layer with a distance between each corresponding base and apex formed between each pair of said transversely oblique folds being not less than a linear dimension exhibited by said base, with said linear dimension being greater than said thickness.

85. The process of claim 83, further comprised of removably attaching said filter medium onto said first grid.

86. The process of claim 83, further comprised of inserting an assembly formed by said first grid and said filter medium into a frame with an electrically insulating seal separating said assembly from said frame and restricting passage of the gaseous fluid between said assembly and

said frame.

87. The process of claim 83, further comprised of:

forming an assembly of said first grid and said filter medium;

potting ends of said assembly intermediate, said upstream side and said downstream side with an electrically insulating material; and

inserting said assembly into a frame with said insulating material forming a seal to passage of the gaseous fluid between said ends and said frame.

88. An electrically enhanced filter, comprising:

a layer of a porous medium exhibiting a thickness between a major first surface and a major second thickness, folded into one or more pairs of arms each joined together at an apex and defining an included pocket;

a first electrically conducting, perforated grid, extending across said arms of said first major surface; and

a second electrically conducting, perforated grid, extending across said arms of said second major surface.

89. The filter of claim 88, further comprised of an electrical insulator interposed between said porous medium and said second grid, maintaining said second grid spaced apart from said porous medium.

90. The filter of claim 88, further comprised of said layer extending along each of said arms in a linear continuum from each said apex and along each said pocket.

91. The filter of claim 88, further comprised of said layer exhibiting a plurality of folds undulating between said first grid and said second grid along each of said arms.

92. The filter of claim 88, further comprised of an end cap extending linearly along said apex, encapsulating said apex of said medium.

93. The filter of claim 88, further comprised of an end cap extending linearly along said apex while encapsulating said apex of said medium and an intervening one of said first grid and said second grid.

94. An electrically enhanced filter, comprising:

a perforated screen of an electrically conducting material approximately defining a planar surface;

a plurality of spaced-apart electrically conducting wires suspended in an array extending across said surface; and

an electrical insulator maintaining at least one of said wires spaced-apart from said surface.

95. The electrically enhanced filter of claim 94, further comprised of a spring having a first end supported by said insulator and a second end maintaining said at least one of said wires under tension.

96. The electrically enhanced filter of claim 94, further comprised of a spring interposed to connect said electrical connector and said at least one of said wires.

97. The electrically enhanced filter of claim 94, further comprised of said array comprised of a plurality of said wires extending across said surface with a first transverse separation between said wires within each pair of said wires, and with a second and greater separation between each said pair.